



# MATERIAL SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 02/04/2013

Version 1.0

## SECTION 1. Identification

### Product identifier

Product number 820421  
Product name Dibutyltin dilaurate for synthesis

### Relevant identified uses of the substance or mixture and uses advised against

Identified uses Chemical for synthesis

### Details of the supplier of the safety data sheet

Company EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | SDS Phone Support: +1-978-715-1335 | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)  
e-mail: mm\_sds@merckgroup.com

Emergency telephone 800-424-9300 CHEMTREC (USA)  
+1-703-527-3887 CHEMTREC (International)  
24 Hours/day; 7 Days/week

## SECTION 2. Hazards identification

### GHS Classification

Acute toxicity, Category 3, Oral, H301  
Specific target organ systemic toxicity - repeated exposure, Category 2, H373  
Skin irritation, Category 2, H315  
Eye irritation, Category 2, H319  
Chronic aquatic toxicity, Category 1, H410  
Acute aquatic toxicity, Category 1, H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS-Labeling

#### Hazard pictograms



Signal Word  
Danger

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## *Hazard Statements*

H301 Toxic if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

## *Precautionary Statements*

P273 Avoid release to the environment.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

## **OSHA Hazards**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## **Other hazards**

None known.

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## **SECTION 3. Composition/information on ingredients**

|            |  |
|------------|--|
| Formula    | C <sub>32</sub> H <sub>64</sub> O <sub>4</sub> Sn (Hill) |
| CAS-No.    | 77-58-7  |
| Molar mass | 631.55 g/mol   |

## **Hazardous ingredients**

*Chemical Name ( Concentration)*

CAS-No.

*Dibutyltin dilaurate ( >= 90 % - <= 100 % )*  
77-58-7

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## **SECTION 4. First aid measures**

### **Description of first-aid measures**

#### *Inhalation*

After inhalation: fresh air.

#### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

#### *Eye contact*

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

#### *Ingestion*

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

Never give anything by mouth to an unconscious person.

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### **Most important symptoms and effects, both acute and delayed**

irritant effects, Diarrhea, Nausea, Vomiting

The following applies to organic tin compounds in general: systemic effect: CNS disorders (spasms, narcosis, respiratory paralysis).

### **Indication of any immediate medical attention and special treatment needed**

No information available.

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## **SECTION 5. Fire-fighting measures**

### **Extinguishing media**

*Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### **Special hazards arising from the substance or mixture**

Combustible material, Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

### **Advice for firefighters**

*Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of vapors/aerosols or dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### **Environmental precautions**

Do not empty into drains.

### **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Depending on the state of matter, take up dry or with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

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## **SECTION 7. Handling and storage**

### **Precautions for safe handling**

Observe label precautions.

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## Conditions for safe storage, including any incompatibilities

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at +15°C to +25°C (+59°F to +77°F).

## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

| Basis                               | Value  | Threshold limits      | Remarks  |
|-------------------------------------|--|-----------------------|--|
| <i>Dibutyltin dilaurate 77-58-7</i> |  |                       |  |
| ACGIH                               | Time Weighted Average (TWA):                 | 0.1 mg/m <sup>3</sup> | Expressed as: as Sn                                      |
|                                     | Short Term Exposure Limit (STEL):            | 0.2 mg/m <sup>3</sup> | Expressed as: as Sn                                      |
|                                     | Skin designation:                            |                       | Can be absorbed through the skin.<br>Expressed as: as Sn |
| NIOSH/GUIDE                         | Recommended exposure limit (REL):            | 0.1 mg/m <sup>3</sup> | Expressed as: as Sn                                      |
|                                     | Skin designation:                            |                       | Can be absorbed through the skin.<br>Expressed as: as Sn |
| OSHA_TRANS                          | PEL:   | 0.1 mg/m <sup>3</sup> | Expressed as: as Sn                                      |
| Z1A                                 | Time Weighted Average (TWA):                 | 0.1 mg/m <sup>3</sup> | Expressed as: as Sn                                      |
|                                     | Skin designation (Final Rule Limit applies): |                       | Can be absorbed through the skin.<br>Expressed as: as Sn |

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

#### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance. Work under hood. Do not inhale substance/mixture.

#### Eye/face protection

Safety glasses

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Other protective equipment:

protective clothing

#### Respiratory protection

required when dusts/vapors/aerosols are generated.

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Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## SECTION 9. Physical and chemical properties

|  |   |
|--|---|
| Physical state                         | solid   |
| Color                                  | colorless   |
| Odor                                   | fatty odor  |
| Odor Threshold                         | No information available.   |
| pH                                     | No information available.   |
| Melting point                          | 25 - 27 °C  |
| Boiling point/boiling range            | > 482 °F ( > 250 °C)<br>at 1,013 hPa  |
| Flash point                            | 300 °F ( 149 °C)  |
| Evaporation rate                       | No information available.   |
| Flammability (solid, gas)              | No information available.   |
| Lower explosion limit                  | No information available.   |
| Upper explosion limit                  | No information available.   |
| Vapor pressure                         | < 0.1 hPa<br>at 68 °F ( 20 °C)  |
| Relative vapor density                 | No information available.   |
| Relative density                       | 1.05 g/cm <sup>3</sup><br>at 68 °F ( 20 °C)   |
| Water solubility                       | < 0.1 g/l<br>at 68 °F ( 20 °C)  |
| Partition coefficient: n-octanol/water | log Pow: 3.12<br>(experimental)<br>(Lit.) Bioaccumulation is not expected (log Pow <1). |
| Autoignition temperature               | No information available.   |
| Decomposition temperature              | > 482 °F ( > 250 °C)  |

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Viscosity, dynamic 30 - 70 mPa.s  
at 68 °F ( 20 °C)

Explosive properties Not classified as explosive.

Ignition temperature > 392 °F ( > 200 °C)

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## SECTION 10. Stability and reactivity

### Reactivity

Forms explosive mixtures with air on intense heating.

### Chemical stability

sensitive to moisture

### Possibility of hazardous reactions

Violent reactions possible with:  
alkalines, Strong oxidizing agents, acids

### Conditions to avoid

Strong heating (decomposition).  
Strong heating.  
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### Incompatible materials

no information available

### Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Eye contact, Skin contact

#### *Target Organs*

Eyes

Skin

Respiratory system

Central nervous system

Liver

Kidneys

urinary tract

Blood

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## *Acute oral toxicity*

LD50 rat: 175 mg/kg (RTECS)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Nausea, Vomiting, Diarrhea

absorption

## *Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations

## *Acute dermal toxicity*

absorption

## *Skin irritation*

rabbit

Result: Severe irritations  
(External MSDS)

Causes skin irritation.

## *Eye irritation*

rabbit

Result: Eye irritation  
(External MSDS)

Causes serious eye irritation.

## *Genotoxicity in vitro*

Ames test

Result: negative  
(Lit.)

## *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

## *Specific target organ systemic toxicity - repeated exposure*

May cause damage to organs through prolonged or repeated exposure.

## *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

|       |  |
|-------|--|
| IARC  | No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| OSHA  | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |
| NTP   | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                 |
| ACGIH | No ingredient of this product present at levels greater than or  |

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equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### Further information

The following applies to organic tin compounds in general: systemic effect: CNS disorders (spasms, narcosis, respiratory paralysis).

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### Ecotoxicity

#### *Toxicity to fish*

LC50 *Oryzias latipes* (Orange-red killifish): 1 mg/l; 48 h (External MSDS)

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 0.66 mg/l; 24 h (ECOTOX Database)

### Persistence and degradability

No information available.

### Bioaccumulative potential

#### *Partition coefficient: n-octanol/water*

log Pow: 3.12

(experimental)

(Lit.) Bioaccumulation is not expected (log Pow <1).

### Mobility in soil

No information available.

### Other adverse effects

#### *Henry constant*

16309 Pa·m<sup>3</sup>/mol

(Lit.) Distribution preferentially in air.

#### *Additional ecological information*

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.



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## SECTION 14. Transport information

### Land transport (DOT)

UN number UN 2788  
Proper shipping name ORGANOTIN COMPOUND, LIQUID, N.O.S. ( DIBUTYLTIN DILAURATE)  
Class 6.1  
Packing group III  
Environmentally hazardous --

### Air transport (IATA)

UN number UN 2788  
Proper shipping name ORGANOTIN COMPOUND, LIQUID, N.O.S. ( DIBUTYLTIN DILAURATE)  
Class 6.1  
Packing group III  
Environmentally hazardous --  
Special precautions for user no

### Sea transport (IMDG)

UN number UN 2788  
Proper shipping name ORGANOTIN COMPOUND, LIQUID, N.O.S. ( DIBUTYLTIN DILAURATE)  
Class 6.1  
Packing group III  
Environmentally hazardous --  
Special precautions for user yes  
EmS F-A S-A

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## SECTION 15. Regulatory information

### United States of America

#### OSHA Hazards

Toxic by ingestion  
Skin irritant  
Eye irritant  
Target organ effects

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

#### SARA 311/312 Hazards

Acute Health Hazard  
Chronic Health Hazard

#### SARA 313

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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## SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

## Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

## Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

## Pennsylvania Right To Know

*Ingredients*

Dibutyltin dilaurate

## New Jersey Right To Know

*Ingredients*

Dibutyltin dilaurate

## Notification status

TSCA: On TSCA Inventory

DSL: All components of this product are on the Canadian DSL.

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Full text of H-Statements referred to under sections 2 and 3.

|      |  |
|------|--|
| H301 | Toxic if swallowed.  |
| H315 | Causes skin irritation.  |
| H319 | Causes serious eye irritation.                                     |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life.  |
| H410 | Very toxic to aquatic life with long lasting effects.              |

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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